

AMENDMENTS TO THE CLAIMS

Please amend claims 15 and 20, as set forth in the listing of claims that follows:

1-14. (Canceled)

15. (Currently Amended) A catalytic converter, comprising:

a substrate comprising cordierite and having a surface that includes microcracks;

a zirconium phosphate layer disposed on said ~~substrate~~ surface and filling said microcracks;

a catalyst layer disposed on said zirconium phosphate layer; and

a shell disposed around said substrate.

16. (Previously Presented) The catalytic converter of Claim 15, wherein the substrate further comprises zirconia.

17. (Previously Presented) The catalytic converter of Claim 15, wherein said catalyst layer comprises a catalyst material selected from the group consisting of platinum, palladium, rhodium, iridium, osmium, ruthenium, tantalum, zirconium, yttrium, cerium, nickel, copper, and oxides, mixtures, and alloys comprising at least one of the foregoing.

18. (Previously Presented) The catalytic converter of Claim 15, wherein said zirconium phosphate has a thickness of up to about 10 nanometers.

19. (Previously Presented) The catalytic converter of Claim 18, wherein said thickness is up to about 4 nanometers.

20. (Currently Amended) A catalyst substrate for use with a catalytic converter, comprising:

a substrate material comprising cordierite and having a surface that includes microcracks;

a zirconium phosphate layer disposed on said ~~substrate material~~ surface and filling the microcracks; and

a catalyst layer disposed on said zirconium phosphate layer.

21. (Previously Presented) The catalytic converter of Claim 20, wherein the substrate material further comprises zirconia.

22. (Previously Presented) The catalytic converter of Claim 20, wherein said catalyst layer comprises a catalyst material selected from the group consisting of platinum, palladium, rhodium, iridium, osmium, ruthenium, tantalum, zirconium, yttrium, cerium, nickel, copper, and oxides, mixtures, and alloys comprising at least one of the foregoing.

23. (Previously Presented) The catalytic converter of Claim 20, wherein said zirconium phosphate has a thickness of up to about 10 nanometers.

24. (Previously Presented) The catalytic converter of Claim 23, wherein said thickness is up to about 4 nanometers.

25-26. (Cancelled)